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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,706	07/25/2003	Jung-jin Kim	Q75899	2681

23373 7590 06/08/2007  
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WASHINGTON, DC 20037

EXAMINER
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TSE, YOUNG TOI

ART UNIT	PAPER NUMBER
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2611

MAIL DATE	DELIVERY MODE
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06/08/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/626,706

Applicant(s)

KIM ET AL.

Examiner

YOUNG T. TSE

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-9 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20070412.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see pages 9-10, filed March 14, 2007, with respect to the rejection over the Jeong publication under 35 U.S.C. §102(e) have been fully considered and are persuasive. The rejection of claims 1 and 5 has been withdrawn.

### ***Claim Objections***

2. Claims 2-3 and 6-7 are objected to because of the following informalities:

In claim 2 (line 3) and claim 3 (line 2), "channel states" should be "channel state".

In claim 6, lines 11-12, "of the channels" and "of the buffers" should be "of channels" and "of buffers", respectively. Wherein claim 7 depends on claim 6.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-3 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2 (lines 10-13) and claim 9 (line 2), it is unclear what are the differences among "a plurality of buffers", "N number of buffers" and "a number N of the buffers";

and "a plurality of channels", "N number of channels" and "a number N of the channels".  
Further, in claim 2, the calculating section lacks connection or cooperation with the plurality of buffers.

Wherein claim 3 depends on claim 2.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4-5 and 8 are rejected under 35 U.S.C. §102(b) as being anticipated by Lee (U.S. Patent No. 5,973,725).

Lee discloses a VSB or HDTV receiver in Fig. 3 comprising an interference rejection filter (NRF) 308, a post processor 318, an NRF selection controller 326 and an adaptive equalizer 312. The detail embodiment of the NRF selection controller 326 is shown in Fig. 4 which comprises an inverse NRF 328 and an NRF selection determiner 330.

With respect to claims 1 and 5, the NRF 308, the post processor 318, and the NRF selection controller 326 correspond to the channel state judging section or step for judging channel states of an inputted signal by using a field sync of the inputted signal, Lee teaches that in most determinations for the selection of the NRF performed by the NRF selection determiner 330, the channel states of the NRF path and non-NRF path

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are detected using the data of a known signal period (data of the field sync segment period in the case of GA-VSB signal), to select the channel with the best channel condition (see column 5, lines 10-15); and the adaptive equalizer 312 corresponds to the equalizing section or step for compensating in a well known manner in a VSB or HDTV receiver for a channel distortion of the inputted signal by initializing a parameter on the basis of the judged or determined channel state. Although Lee does not explicitly show or suggest that the channel state(s) of the NRF path and non-NRF path is one of a static state and a dynamic state as recited in the amendments of claims 1 and 5, Lee clearly teaches that the channel states of the NRF path and non-NRF path are detected using the data of a known signal period and the data of the field sync segment period is in the case of GA-VSB signal. It is inherent and well known to a person skill in the art that a transmission channel state for a VSB broadcast signal is a dynamic state if varying with time or a transmission channel state for a VSB broadcast signal is a static state if not varying with time, for example, described in paragraph [0048] of the well known U. S. Publication No. 2003/0223519 A1. Therefore, the channel state(s) of the NRF path and non-NRF path used in the VSB broadcast signal could be either a static state or a dynamic state, for example, in order to improve the equalization performance by the adaptive equalizer 312 or 320.

With respect to claims 4 and 8, it is also well known in the art that a field sync of the field sync segment used in VSB or HDTV receivers is a PN sequence.

***Allowable Subject Matter***

7. Claims 6 and 7 would be allowable if rewritten or amended to overcome the objection(s) set forth in this Office action.
8. Claims 2-3 and 9 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wang et al. relates to an adaptive equalizer for processing a demodulated VSB signal containing terrestrial broadcast high definition television information operates adaptively in blind, training, and decision-directed modes.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

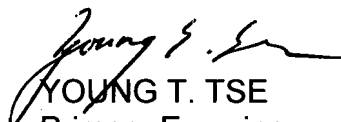
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-3051. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
YOUNG T. TSE  
Primary Examiner  
Art Unit 2611